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Investigation of the photoionization of Ce3+ ions in a YAG crystal by microwave resonance technique

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Abstract

The kinetic and spectral characteristics of the complex dielectric constant of a Ce: YAG crystal under laser irradiation in 250-275 nm spectral range are investigated. The lifetimes of free charge carriers and charge carriers, localized at the lattice defects (color centers), are estimated. It was established that photoconductivity signal of the sample is essentially caused by one-photon ionization processes from the 2F5/2 ground state of Ce3+ ions. © 2013 Pleiades Publishing, Ltd.

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